

Proposal

Enterprise GIS Initiations and Planning

RFP No. ISD1830

Produced For:



Produced By:



VESTRA Resources, Inc.

5300 Aviation Drive

Redding, CA 96002

(530) 223-2585

www.vestra.com

February 27, 2015





5300 Aviation Drive | Redding, CA 96002
Phone 530.223.2585 | Fax 530.223.1145
info@vestra.com | www.vestra.com

GIS, Environmental, & Engineering Services

February 27, 2015

County of San Mateo
455 County Center, 2nd Floor
Redwood City CA 94063
Attn: Frances Valido

RE: Request for Proposals – Enterprise GIS Initiations and Planning

This letter officially identifies VESTRA Resources, Inc. as submitting a proposal to the County of San Mateo in regards to RFP No. ISD1830. Listed below is the name and contact information for our authorized negotiator and authorized signor for VESTRA. Also, listed is staff available for clarification.

Authorized Signor

Arthur Stackhouse
President / CEO
P: 530-223-2585
F: 530-223-1145
E: astackhouse@vestra.com

Authorized Negotiator and Authorized Contact for Clarification

Kimberly Wilkes
Operations Manager / CFO
P: 530-223-2585
F: 530-223-1145
E: kwilkes@vestra.com

VESTRA is a California Multiple Award Schedule (CMAS) Contractor. Our CMAS Contract number is 3-12-70-0650C. In addition, VESTRA is a Certified Small Business; our Certified Small Business number is 13183.

VESTRA has received all known addenda's to this RFP and replied accordingly. We look forward to the opportunity of working with you, if you have any questions please contact us at 530-223-2585.

Sincerely,

A handwritten signature in black ink that reads "Arthur L. Stackhouse".

Arthur Stackhouse
President
VESTRA Resources, Inc.

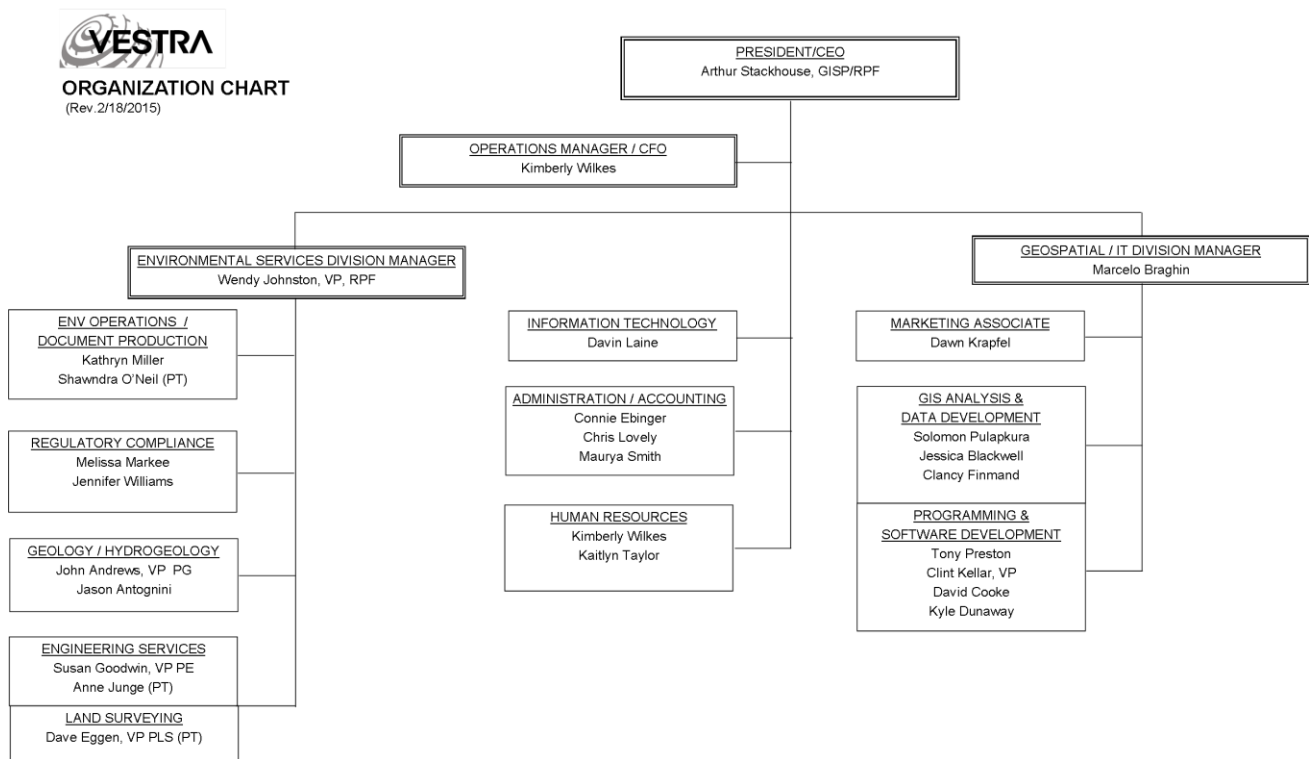
Enclosure(s)

OVERVIEW

The County of San Mateo (County) is seeking to acquire professional services to conduct a comprehensive Geographic Information System (GIS) needs assessment, develop a conceptual system design, and prepare an implementation plan for the County's enterprise GIS that will help the County consolidate its mapping and GIS functions and allow for best of breed mapping standards to be utilized. The following Scope of Work describes VESTRA Resources, Inc. (VESTRA) approach and tasks to be performed for these items.

SECTION 1 – FIRM QUALIFICATIONS AND EXPERIENCE

VESTRA has 26 employees company-wide, with 11 dedicated GIS/IT professionals.



For more than 27 years, VESTRA has been on the cutting edge of developing geospatial information solutions. As an Esri® Certified Gold Partner and a full-service geospatial and IT systems provider, VESTRA's capabilities and expert knowledge leverage advanced technology and our ability to help clients assess their needs, collaborate, and secure and manage their information. This combination of longevity in the field and technical expertise provides VESTRA with an exclusive perspective that allows us to meet and exceed our clients' needs. VESTRA's wide ranging experience includes nearly three decades of developing and implementing Enterprise GIS solutions. During our 27 years of business, VESTRA has completed hundreds of GIS Projects including needs assessments for clients. Included in this experience are needs assessments performed for organizations with similar requirements and that are found within the City. VESTRA is recognized as a leader in GIS technology, and the value placed on client satisfaction and customer service is demonstrated by our 90% client retention rate.

The strength of our team is the combined experience of both developing comprehensive plans for establishing an enterprise GIS, and implementing those plans. Having successfully executed both of these aspects for numerous clients provides a strong understanding of the requirements, technological challenges and resources, and real-world solutions. The following individuals will be assigned to provide the services requested by the County. A complete resume for each team member has also been included.

Art Stackhouse***President / CEO***

Art Stackhouse is the President of VESTRA Resources, Inc., and has over 40 years of experience in GIS database development, implementation of GIS concepts and best practices, computer-hardware configuration, and the design, development, and implementation of enterprise geographic information systems. At VESTRA, Art has acted in a variety of project roles, from Project Manager to Lead Analyst, and even Python Programmer. Art has participated as a senior member of VESTRA's enterprise GIS team on a wide array of projects including GIS implementations in Calaveras, Napa, Mendocino, Lake, Lassen, and Contra Costa Counties. He has also been actively involved with GIS implementations at the San Francisco Public Utility Commission, Sonoma County Water Agency, and the California Office of Statewide Health Planning and Development. Because of his experience, Art provides senior level oversight and quality assurance/quality control on many of VESTRA's more complex projects. As the President of VESTRA, Art has overall responsibility for all projects undertaken by VESTRA, and coordinates the personnel, hardware, and software needed to complete each project.

- Advanced understanding of Esri products, tools, applications, and services.
- Long-term experience with management of complex project and client relationships.

Marcelo Braghin***GIS/IT Division Manager***

Marcelo Braghin is the GIS/IT Division Manager for VESTRA Resources and has 20 years of experience in GIS, Remote Sensing, IT, and Database Management with an international footprint. He has successfully implemented GIS standards across companies, countries, and roles in different industries ranging from natural resources to telecom, vehicle tracking, and telematics. On his current role, Mr. Braghin manages a portfolio of GIS consulting projects for different types of organizations and industries, such as Local Government, Environmental, Natural Resources, and others. Mr. Braghin is currently the product manager of GeoSystem Monitor, which is a unique monitoring system for GIS applications. As Senior GIS Analyst, he has worked with different GIS technologies, like ArcGIS for Server workflows, ArcGIS Online and ArcGIS for Desktop workflows for complex GIS Analysis. Mr. Braghin also has worked with mobile GIS workflows to sustain enterprise data management using spatial data. As part of the enterprise implementations, Mr. Braghin implemented GIS integrating with other systems and databases. As part of such implementations, he has managed various projects related to Data Migration (GIS, reports, geophysical, samples / drilling information) and developed some applications where customization was necessary, e.g. to use GIS to support television broadcasts. Mr. Braghin also worked in various projects using Remote Sensing data and technology to support GIS in environmental and natural resources applications.

- Extensive experience managing both large and small projects and teams across various industries.
- Advanced expertise and knowledge of GIS and data management systems implementation.

Clint Kellar***Sr. GIS Specialist / Software Developer***

Clint Kellar serves as a Project Manager, GIS Lead and Software Developer at VESTRA. Mr. Kellar has more than 19 years of experience in the use, application development, and management of GIS solutions. His technical toolkit includes extensive experience with Esri products for GIS analysis, modeling, and application development, as well as the implementation of non-linear system development methodologies and GIS best practices for application development. Clint's experience has focused on the use and implementation of GIS technology for State and Local governments and private corporations. This includes GIS infrastructure development and implementation, tool and workflow creation to meet specific client needs, and custom application development that utilizes up-to-date web technology. Mr. Kellar is passionate about the use these technologies as a tool to solve problems, convey information, with a desired emphasis on user experience design. Some of his most recent work has included managing projects for the National Cattlemen's Beef Association, California Department of Parks and Recreation, California Office of Statewide Health Planning and Development, and UC Davis.

- Extensive analysis and implementation of GIS best practices, Needs Assessments and design of custom solutions.
- Management of diverse projects utilizing cutting-edge technology

Solomon Pulapkura***Sr. GIS Analyst***

Mr. Pulapkura is a GIS Specialist and Planner with 8 years of experience and a background in a wide variety of GIS processes and procedures. His experience includes the design, development, and implementation of multiple types of projects for a variety of governments. He is detail oriented, resourceful, and accurate, with strong analytical and problem solving skills, and the ability to multi-task, reach project goals, and meets tight deadlines. His recent work includes managing projects with the City of Mountain View, City of Oakland, City of Lathrop, Modoc County, and San Francisco Public Utilities Commission.

- Advanced database development skills.
- Comprehensive GIS Needs Assessments and Business Process workflow development.
- Extensive experience with EGIS Implementation.

Jessica Blackwell***QA Specialist / GIS Technician***

Jessica Blackwell is a QA Specialist and GIS Technician with a broad educational and professional background. Jessica's experience includes extensive GIS coursework, landscape architecture design, technical documentation, database development, and spatial analysis using communication technologies. Jessica is thoughtful and detail-oriented, and possesses strong analytical, communication, and problem solving skills.

RECENT EXPERIENCE ON SIMILAR PROJECTS

The following examples detail recently completed projects of similar scope:

Enterprise GIS Development and Implementation

City of Mountain View

2011 - Present

Steve Rodriguez, IT Operations Manager

steve.rodriguez@mountainview.gov

(650) 903-6667

The City of Mountain View implemented an Enterprise Geographic Information System to streamline and improve the current use of GIS within the City. VESTRA worked with the city through the entirety of the project, from a comprehensive needs assessment, initial design and development, to final implementation. Recent efforts include implementing a WordPress based map gallery with a variety of web mapping applications. One example is the parcel viewer which is a culmination of prior efforts that standardized data schemas based on Esri Local Government Information Models, and established common editing workflows and publishing procedures. The parcel viewer allows staff to query parcel information in support of their business processes.

GIS Implementation and Application Development

California Office of Statewide Health Planning and Development (OSHPD)

2003 - Present

Michael O'Neill, Senior GIS Architect

Michael.ONeill@oshpd.ca.gov

(916) 326-3982

For the past ten years VESTRA has supported the California Office of Statewide Health Planning and Development (OSHPD) with the development and enhancement of a statewide enterprise GIS for healthcare quality policy analysis, allocation of funding resources, and to aid in the monitoring of healthcare quality throughout the state. Project work has included assisting with system and network configuration, installation of data and map server hardware and software, design and implementation of a centralized GIS data repository, development of a Web-based GIS application framework for querying and reporting through OSHPD's Intranet, technical support for the integration of GDT data and healthcare workforce management projects, and the creation of enterprise GIS Web-server best practices and maintenance documentation. Most recently, VESTRA has completed an ArcGIS Server upgrade to 10.2, completed custom development for the Emergency Operations Center dashboard website, upgraded the California Healthcare Atlas website platform from Microsoft MVC3 to MVC4, developed a plan for bringing the website in compliance with the Americans with Disabilities Act, and implemented various API updates.

Enterprise GIS Implementation

Tehama County Transportation Commission

2012 - Present

Adam Hansen, Senior Transportation Planner

ahansen@tcpw.ca.gov

(530) 385-1462 x3028

VESTRA supported the Enterprise GIS implementation for Tehama County. VESTRA made recommendations on the IT/GIS architecture and established new enterprise geodatabases based on industry best practices and standard GIS database design models. VESTRA also implemented GIS database maintenance workflows and web mapping applications for the County. A major element in the project was to implement parcel fabric for the entire county and establish workflows and provide training that would help the county make parcel edits in the fabric, update tax parcels using geoprocessing tools, run models to integrate assessors' information and finally publish an updated map service for the parcel viewer to use.

Enterprise GIS Planning and Implementation

Alpine County

2011 - Present

Zach Wood, Planner III

zwood@alpinecountyca.gov

(530) 694-2140 x. 437

For the past 4 years VESTRA has supported Alpine County, California with an Enterprise GIS implementation. VESTRA prepared the Alpine County GIS Master Plan 2011 and since then has been assisting the County with implementing the GIS within planned phases. The phased approach laid the foundation of GIS and data development. VESTRA helped implement a cloud based GIS infrastructure (using ArcGIS Online) and assisted in data maintenance workflows. Later phases helped implement web mapping viewers for the County. Currently, VESTRA is helping the County expand their online GIS presence in the County by understanding needs related to additional applications and GIS contribution to daily business processes.

Emeryville Enterprise GIS

City of Emeryville

2010 - Present

Michael Parenti, Information Technology Manager

mparenti@emeryville.org

(510) 450-7803

In 2010, VESTRA initiated work with the City of Emeryville to configure and implement an Enterprise GIS. The project began with a high-level needs assessment to identify current and potential uses of GIS technology within the City. Based on the results of this assessment, VESTRA developed the system architecture for the Enterprise GIS platform. VESTRA supported the City with implementing this architecture by installing and configuring desktop and server GIS software, creating a master geodatabase, and providing training to staff on the use and management of the platform. Following the implementation, VESTRA has supported the City by providing technical support, geodatabase conversion and editing and custom GIS application development.

SECTION 2 – PROPOSED APPROACH

The following activities will be performed under this Scope of Work. The Scope of Work, along with its tasks and sub tasks reflect VESTRA's methodical and meticulous approach toward meeting the overall goal for the County: To establish a consolidated, enterprise GIS that utilizes "best of breed" mapping standards.

An important consideration for this project is the County's current use of GIS technology, which utilizes much of the Esri ArcGIS platform. With this existing foundation in place, the focus of all project activities will be to build upon this existing platform by capitalizing on technologies and capabilities now available with the latest release of ArcGIS software (e.g. Portal for ArcGIS, ArcGIS Online, and ArcGIS Pro). These tools enable greater efficiency in creating and sharing information, integration of GIS information into existing business workflows, and rapid deployment of focused maps and applications that are tailored to the specific needs of end users. The services provided here will be completed with open and continuous communications between VESTRA and the main stakeholders appointed by the County of San Mateo. As part of VESTRA's Project Management approach, an ideas management site will be created at the beginning of each project.

In the event an issue is identified by the County and/or other applicable constituents, the VESTRA Project Manager will act immediately and will formulate a plan according to the agreed risk analysis made in conjunction with the San Mateo County. Should there be a routine issue; VESTRA's project manager can be contacted by e-mail or telephone. In a case where a resolution cannot be immediately found, it will be escalated to VESTRA's CEO.

As an effort to reduce costs, the vast majority of the work will be completed remotely. Regular communication will be maintained using telephone and web-based meetings (e.g. using GoToMeeting). The value of face to face interaction is recognized, and essential meetings such as requirements gathering meetings are budgeted to be performed on-site..

TASK 1: COMPREHENSIVE NEEDS ASSESSMENT

VESTRA will initiate the project with activities to create a Comprehensive Needs Assessment on the County's GIS. This task will be split in three sub-tasks:

1.1 2013 Geospatial Assessment Review - VESTRA will use the County's 2013 geospatial assessment as a starting point to fully understand the GIS commonalities, vision, and goals for the County GIS Platform. VESTRA may request additional information obtained for the development of the Geospatial Workshop Preliminary Findings document. VESTRA will use this material to help inform and structure subsequent tasks and activities as applicable.

1.2 Requirements Gathering Interviews - VESTRA will conduct a series of Requirements Gathering Interviews with each of the twelve departments identified in the RFP. All interviews will be conducted on-site. The Requirements Gathering Interviews are anticipated to occur at two levels:

Level 1 – These interviews will be attended by executives and decision makers (e.g. directors and managers) from multiple divisions within a particular department. For example, a Level 1 Public Works Department Requirements Gathering Interview may include the Director, Deputy Directors and managers from Road Operations, Utilities, Engineering, Capital Projects, etc. The goal of the Level 1 interviews will be to understand:

1. Department level business goals and objectives.
2. Department level business needs and outcomes desired in the areas of applications and solutions, data sharing, governance, performance criteria and cross departmental interactions.
3. Department level challenges and gap analysis.

Level 2 – These interviews will be attended by managers, supervisors and knowledge workers from one or more divisions within the department. For example, a Level 2 Public Works Department Requirements Gathering Interview may include the manager from Flood Control, Utilities and Watershed Protection along with a few knowledge workers from that group. The scope and structure of these interviews will be informed by the Level 1 interviews. The goal of the Level 2 interviews will be to understand:

1. Division and/or project and/or task level business processes and workflows.
2. Division and/or project and/or task level business needs and outcomes desired in the areas of applications and solutions, data sharing, governance and performance criteria.
3. Division and/or project and/or task level Information Product Description (IPD) identification.
4. Division and/or project and/or task level challenges and gap analysis.

Level 2 interviews may also include one-on-one sessions with knowledge workers in their work environment to understand specifics of workflow practices, data needs and output requirements. Follow-up interviews with individual County staff members may be conducted (via phone or email) to obtain clarification on information obtained during the Requirements Interviews.

1.3 Comprehensive Needs Assessment Report Compilation - VESTRA will compile all information gathered during tasks 1.1 and 1.2 into a comprehensive needs assessment report. The report will summarize and document the following –

- a. Department business goals and objectives.
- b. Department business processes and workflows.
- c. Department Information Product Descriptions in the following format –

IPD Name	Requested Department	Summary of use	Output requirements	Preparation Steps	Usage frequency
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For each IPD, a Master Input Data List (MIDL) will be prepared in the following format –

MIDL number	Data Name	Format / Type	Description and Preparation Steps
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An MIDL number will be assigned to be used in later tasks (e.g. Task 3) to tie the various assessments together.

NOTE – The readiness of data listed in the MIDL will be addressed in Task 3.

- d. Department business needs and outcomes desired.
- e. Department challenges and gap analysis.

Task 1 Deliverables:

1. Comprehensive Needs Assessment Report.

Task 1 Type of resources and level of commitment from the County

1. Executives and decision makers: 2 hours;
2. Managers, supervisors and knowledge workers: 2 hours;
3. ISD personnel: 4 hours / week.

Task 1 Physical Space and/or equipment

1. Room for 15 people and data projector: two hours

Task 1 Assumptions:

1. Schedule and interview agendas will be communicated prior to the interviews with the County project manager.
2. Examples of information products will be shared with VESTRA during or after interviews. This may include hard and soft copies of maps, data, tables, reports, etc.
3. IPD and MIDL table formats are subject to change based on the need and what is learnt during the interviews. The final formats to be included in the report will be discussed with the County for approval.

TASK 2: TECHNOLOGY READINESS ASSESSMENT

Using information gathered in the Needs Assessment, VESTRA will perform a Technology Readiness Assessment. Given the County's ArcGIS-based architecture currently on-hand, much of the work in this assessment will consider how this platform is currently used, and can be expanded upon to accomplish the GIS implementation.

2.1 Technology Review – VESTRA will evaluate the current technology environment and system infrastructure and determine requirements to support the enterprise GIS implementation. Each business need/objective and associated use case scenarios will be evaluated for applicable technology needs, including the following key system components:

- a. Computer hardware (including servers, workstations, network and communication) needed to support the implementation of GIS applications and procedures.
- b. GIS and associated software requirements to support the implementation
- c. System administration and security standards (e.g. user names, passwords, certificates) and protocols.
- d. System architecture gaps.
- e. IT policies and standards.
- f. IT asset lifecycle procedures.
- g. Performance criteria.

2.2 Conceptual System Design – VESTRA will prepare a conceptual system design based on the findings in the Technology Review conducted in Task 2.1 as well as the business objectives and outcomes of the Needs Assessment from Task 1. The Conceptual Design will include the overall architecture components necessary to address the business needs/objectives and their associated user case scenarios, including;

- a. GIS system architecture (e.g. GIS and database servers, network and communication configuration).
- b. GIS integration with other enterprise systems.
- c. System performance criteria.
- d. Security and authentication strategies, including portal or role-based access to GIS information.
- e. Mobility and field access.
- f. Strategies for internal and external access to GIS information through the use of focused web map applications.

2.3 Technology Readiness Assessment Report Compilation - VESTRA will compile all information gathered during tasks 2.1 and 2.2 into a Technology Readiness Assessment Report. The report will include a review of the hardware, software and network configurations and a conceptual system design.

Task 2 Deliverables:

1. Technology Readiness Assessment Report.

Task 2 Type of resources and level of commitment from the County

1. ISD personnel: 4 hours / week.

Task 2 Physical Space and/or equipment

1. None

Task 2 Assumptions:

1. Parts of the technology readiness assessment are anticipated to be informed by evaluations made in other tasks as well such as needs assessment, enterprise database readiness assessment and organizational readiness assessment.

TASK 3: ENTERPRISE GIS DATABASE READINESS ASSESSMENT

GIS Data Readiness Review – VESTRA will evaluate the readiness of the GIS data within the County. This task will use and expand on information gathered during Task 1. For each data layer, its readiness will be evaluated per the table below. Additionally, the data layer evaluation will tie the relation between the corresponding business process and IPD that will use the data layer providing a complete picture of the need for this layer. Other useful information such as data preparation steps, metadata gaps, and data stewards identified will also be included.

Data Layer Name (and MIDL number) if applicable	Description and Preparation Steps	Completeness (Approximate percent of county covered). Incl. metadata assessment	Accuracy (high, medium or low)	Priority (high, medium or low)	Data Steward(s)	IPD Name and Business Process

Conceptual Database Design – VESTRA, in consultation with the county will arrange the data evaluated per Task 3.1 into major categories. The major categories are groupings of logically related data. Examples include transportation, cadastral, utilities, etc. VESTRA will inspect the data for logical relationships and associations between data layers within and across major categories.

A high level logical data model will be prepared as part of the conceptual database design. This model will take into consideration existing standard models, such as Esri's Local Government Information Model, that can be used to efficiently store and manage information, and also capitalize on pre-built maps and applications. Methods for management and access of the data will also be considered. For example, Portal for ArcGIS can now be used to manage ArcSDE-based geodatabases. This allows for more efficient management of the database, while enabling users to create and manage their own information.

Enterprise GIS Database Readiness Assessment Report – VESTRA will compile all information gathered in Tasks 3.2 and 3.3 above into an Enterprise GIS Database Readiness Assessment Report. In addition, the report is anticipated to include the following evaluations:

- a. Current data layer schema consistency;
- b. Enterprise GIS data update, maintenance and usage practices.

Task 3 Deliverables

1. Enterprise GIS Database Readiness Assessment Report.

Task 3 Type of resources and level of commitment from the County

1. ISD personnel: 4 hours / week.

Task 3 Physical Space and/or equipment

1. None

Task 3 Assumptions

1. The logical data model for the conceptual design portion will exclude intricate relationships and implementation details (e.g. primary / foreign key relationships attribute schema, data types and domain requirements will not be included).

TASK 4: ORGANIZATIONAL READINESS ASSESSMENT

4.1 ISD Readiness Review – VESTRA will review the formal structure for governing and coordinating enterprise GIS within the county starting with the central GIS team in the Information Systems Department (ISD). The following key areas will be reviewed –

- a. Current enterprise GIS planning procedures with respect to solution, application and data design and decision making.
- b. Development frameworks and methods followed.
- c. Current internal stakeholder support and engagement procedures with respect to solutions, applications and data.
- d. Roles, skills and experience of the central GIS team.
- e. Current and future training plans.

4.2 Department Readiness Review – VESTRA will examine department readiness to adapt to enterprise GIS and modify work processes. The following key areas will be reviewed –

- a. GIS staffing, skills and training needs;
- b. Current data update and release processes;
- c. Current internal support processes.

4.3 Governance Plan - Based on tasks 4.1 and 4.2, VESTRA will create a Governance Plan that will outline the administration, maintenance and support of the enterprise GIS and the roles of ISD and other departments.

4.4 Organizational Readiness Assessment Report – VESTRA will compile all information gathered in Tasks 4.1, 4.2 and 4.3 into an Organizational Readiness Assessment Report. This report will include:

- a. ISD and Department Training Plan;
- b. Internal support procedures and service level agreement structures;

- c. Data and application release procedures;
- d. Staffing models and skills recommendations;
- e. Governance Plan.

Task 4 Deliverables

- 1. Organizational Readiness Assessment Report.

Task 4 Type of resources and level of commitment from the County

- 1. ISD personnel: 4 hours / week.

Task 4 Physical Space and/or equipment

- 1. None

Task 4 Assumptions

- 1. Some of the information in this task may be gleaned from assessments in earlier tasks.

TASK 5: IMPLEMENTATION PLAN

5.1 Recommendations – VESTRA will use the results of tasks 1-4 to make recommendations based on industry experience, best practices and emerging trends. Recommendations will address the needs and gaps identified at the department as well as organization level. VESTRA will document the recommendations for the County's review and approval. Recommendations are anticipated to be made in the following broad areas –

- a. Technology and Infrastructure
- b. Data
- c. Applications and Solutions
- d. Business Processes and Workflows
- e. Standards, Policies and Governance
- f. Staffing and Training
- g. Organization

5.2 Enterprise GIS Implementation Plan – VESTRA will use the recommendations in task 5.1 to create a clear roadmap for how the County can plan and implement the enterprise GIS. The plan will be structured so that implementation happens in phases. This will give the county the flexibility to plan and prioritize goals and tasks. The plan will be designed so that the implementation of the enterprise GIS is a collaborative effort. The implementation plan is expected to include –

- a. High level project timeline
- b. Cost estimate to implement the enterprise GIS
- c. Cost benefit analysis
- d. Migration plan and timeline
- e. Implementation risk analysis

A draft version of the Enterprise Implementation Plan will be submitted to the main stakeholders, followed by a final telecom workshop to collect questions and suggestions for a final review. VESTRA will collect comments and suggestions from the final review and compile the final version of the implementation plan.

Task 5 Deliverables

1. Enterprise GIS Implementation Plan

Task 5 Type of resources and level of commitment from the County

1. ISD personnel: 4 hours / week.

Task 5 Physical Space and/or equipment

1. None

Task 5 Assumptions

1. Some of the information in this task may be gleaned from assessments in earlier tasks.
2. This implementation plan will be based on PMBOK Fifth Edition (PMI) approach.
3. Funding structure for the implementation plan is not going to be proposed here.
4. Basic concepts from Software Development Life Cycle (SDLC) will be used.

TASK 6: FINAL PRESENTATION

6.1 Presentation – VESTRA will prepare a final presentation that will report all project findings and recommendations to the GIS steering committee and user group. This will include -

- a. Executive Summary
- b. Recommended approach with proposed list of actions
- c. Gaps identified and risks
- d. Risks and concerns
- e. Reflection on previous planning.

The presentations will be followed by a Questions and Answers session.

Task 6 Type of resources and level of commitment from the County

1. County GIS Steering Committee and user group: 1 hour presentation, including Q&A session.

Task 6 Physical Space and/or equipment

1. Meeting Room big enough to accommodate all main stakeholders for the presentation with data projector.

Task 6 Assumptions

1. Previous deliverables would be approved prior to this final presentation.
2. The Q&A session will represent the closure of this engagement.

GENERAL ASSUMPTIONS:

1. VESTRA and San Mateo County will each designate a person to whom all project communications may be addressed and who has the authority to act on all aspects of the project.
2. Any change requests other than what is outlined in this Scope of Work will need to be agreed upon by both VESTRA and San Mateo County prior to work being performed.
3. San Mateo County will provide sufficient access to appropriate levels of staff as required to facilitate the performance of consulting tasks and the creation of deliverables.
4. Both VESTRA and San Mateo County will respond to requests for required information and/or resources no longer than five (5) business days.
5. San Mateo County will provide access to any GIS source information and/or environments necessary for deployment.
6. All deliverables will be reviewed by San Mateo County and approved or issues identified within five (5) business days of receipt.

SECTION 3 – CLAIMS AND VIOLATIONS AGAINST VESTRA RESOURCES, INC

Within the last five years, VESTRA Resources, Inc. has not been found in violation of any statutes or regulations, but VESTRA was the subject of a former employee’s civil action against us in Shasta Superior Court. The Court dismissed this action within approximately 90 days of the employee serving the suit because this former employee’s action had no merit and the Court subsequently awarded VESTRA the fees and costs incurred defending the action. This former employee’s action is the only claim or violation against VESTRA in the past five years.

SECTION 4 – COST TO THE COUNTY FOR SYSTEM AND IMPLEMENTATION SERVICES

This estimate is provided on a time and material, not-to-exceed basis, with a maximum cost of not more than \$45,080. The actual hours incurred by each staff resource may vary during actual contract work. It is assumed that it is permissible for resources to be re-allocated based upon work, as long as the maximum cost is not exceeded.

Task	Description	Estimated Hours	Estimated Cost
1	Comprehensive Needs Assessment	66	\$10,807
2	Technology Readiness Assessment	69	\$9,294
3	Enterprise GIS Database Readiness Assessment	62	\$7,786
4	Organizational Readiness Assessment	60	\$7,830
5	Implementation Plan	47	\$5,951
6	Final Presentation	25	\$3,412
Project Totals		329	\$45,080

Note 1: There are no ongoing license or maintenance fees associated with this estimate. It is assumed the County will maintain all necessary software licensing (e.g. staying current on maintenance of Esri software), separate from this project.

Note 2: Travel time and related expenses are incorporated into the estimated total.

SECTION 5 – COOPERATIVE PURCHASING AND COST OF POSSIBLE ADDITIONAL SERVICES

The resultant contract from this RFP can be extended to other San Mateo County cities and/or public agencies in the San Francisco Bay Area upon their request.

VESTRA is committed to a successful Enterprise GIS implementation for the San Mateo County, and proposes the following services in order to increase the chance of the counties' success:

- As part of the engagement process, VESTRA would develop tailored GIS demonstrations for each department, using ArcGIS Online resources. These demonstrations would require some GIS data to be provided by each interested departments at least one week before the workshops to allow VESTRA time to create accurate demos. The cost for each demonstration (including its preparation), would be \$1,000. This figure would be in addition to the costs specified in the scope of work.
- Project Management is a key component for a successful Enterprise GIS implementation. In order to ensure success, VESTRA proposes the development of a fully detailed project plan including the following PMI areas:
 - o Project Integration Management;
 - o Project Scope Management;
 - o Project Time Management;
 - o Project Cost Management;
 - o Project Quality Management;
 - o Project Human Resource Management;
 - o Project Communications Management;
 - o Project Risk Management;
 - o Project Procurement Management;
 - o Project Stakeholder Management.

This project manage service will take advantage of the outcomes from the high level implementation plan and provide a more detailed view of how this project will be in the future. This Project Management option would be an additional cost of \$ 6,000.

SECTION 6 – REFERENCES

VESTRA has an extensive list of successful projects with clients who required similar services to this proposal:

City of Mountain View EGIS Implementation

Steve Rodriguez, IT Operations Manager
City of Mountain View
steve.rodriguez@mountainview.gov
(650) 903-6667

GIS Implementation and Atlas Application Development

Michael O'Neill, Senior GIS Architect
California Office of Statewide Health Planning and Development (OSHPD)
Michael.ONeill@oshpd.ca.gov
(916) 326-3982



Enterprise GIS Implementation for City of Redding

Devon Hedemark, GIS Supervisor
City of Redding
dhedemark@ci.redding.ca.us
(530) 225-4391

Alpine County Enterprise GIS

Zach Wood, Planner III
Community Development Department - County of Alpine
zwood@alpinecountyca.gov
(530) 694-2140 x. 437

Enterprise GIS Implementation for Tehama County

Adam Hansen, Senior Transportation Planner
Tehama County Transportation Commission
ahansen@tcpw.ca.gov
(530) 385-1462 x3028

County of Modoc Enterprise GIS

Warren Farnam, Environmental Health Director
Modoc County
warrenfarnam@co.modoc.ca.us
(530) 233-6350

SECTION 7 – STATEMENT OF COMPLIANCE WITH COUNTY CONTRACTUAL REQUIREMENTS

VESTRA agrees to resolve any disputes regarding contract issues within a venue in San Mateo County or the Northern District of California. VESTRA is also a fully insured, and equal opportunity employer that is able to comply with all San Mateo County Compliance requirements, including but not limited to:

- Non Discrimination Policy;
- Equal Employment Opportunity;
- Employee Benefits;
- Jury Duty Ordinance;
- Insurance Requirements;
- And all other provisions of the standard contract.



ATTACHMENT - RESUMES



Experience Highlights

Advanced understanding of Esri products, tools, applications, and services.

Long-term experience with management of complex project and client relationships.

Certified Esri trainer.

Education

Post Graduate Study
Economics and Management
University of Southern California

M.S.
Wildland Resource Sciences
University of California, Berkeley

B.S.
School of Forestry and Conservation
University of California, Berkeley

Recent Clients

Rich Strazzo
CA Department of Forestry and Fire
Protection
785 Mountain Ranch Road
San Andreas, CA 95249
(209) 754-2725
Rich.Strazzo@fire.ca.gov

Art Stackhouse

President/Program Manager

Art Stackhouse is the President of VESTRA Resources, Inc., and has over 40 years of experience in GIS database development, implementation of GIS concepts and best practices, computer-hardware configuration, and the design, development, and implementation of enterprise geographic information systems.

Early in Mr. Stackhouse's career he worked as a forester for a major timber company in California, developing silvicultural prescriptions and supervising road construction, logging, and reforestation efforts. His interest in forest planning and mapping led to an opportunity to develop a GIS for the timber company's holdings during the mid-1980's, and later led to his becoming responsible for Information Technology throughout the company. In 1988 Art and a small group of fellow employees started VESTRA Resources; one of the first GIS services firms in the United States.

At VESTRA, Art has acted in a variety of project roles, from Project Manager to Lead Analyst, and even Python Programmer. Art has participated as a senior member of VESTRA's enterprise GIS team on a wide array of projects including GIS implementations in Calaveras, Napa, Mendocino, Lake, Lassen, and Contra Costa Counties. He has also been actively involved with GIS implementations at the San Francisco Public Utility Commission, Sonoma County Water Agency, and the California Office of Statewide Health Planning and Development. Because of his experience, Art provides senior level oversight and quality assurance/quality control on many of VESTRA's more complex projects. As the President of VESTRA, Art has overall responsibility for all projects undertaken by VESTRA, and coordinates the personnel, hardware, and software needed to complete each project.

Representative Project Experience

Regional GIS Platform-Feasibility Study, Shasta County Regional Transportation Agency, Redding, CA.

Mr. Stackhouse acted as the Senior Project Manager for the GIS Platform Feasibility Study. This study was an analysis related to the concept of a regional GIS data warehouse where spatial analysis, decision-making support, and a framework to develop custom tools and applications could be made available. Professionals from all eight region's well-respected GIS community participated during each phase of the study, acting on behalf of their respective agency/organization and the greater region by way of the Far North Regional GIS Council.

The Feasibility Study was the region's first step toward the compilation, standardization, and merging of many GIS data silos under one roof. The overarching goal of the effort is to minimize or eliminate the technological and informational barriers to coordinated regional planning. As the Senior Project Manager, Mr. Stackhouse was instrumental in developing the scope of the study, which included an exploration and evaluation of data needs, data standards, software and technology options, hosting and hardware options, and implementation strategies. The approximate contract amount was \$150,000.

Business Process Re-Engineering, California Department of Transportation, Sacramento, CA.

Mr. Stackhouse provided high-level business intelligence support to Caltrans during their efforts to reevaluate their business processes. A Business Process Re-engineering was the first step towards envisioning a new system with more stream-lined processes, which will in turn facilitate major upgrades and/or replacements to one or more components of the existing system(s). Mr. Stackhouse used a structured approach for this re-engineering effort which helped ensure that core business functions were clearly addressed, and that future processes were supported. He worked with the stakeholder to identify gaps between the existing core processes as performed and these future processes. The methods used included project management, quality assurance, Michael Hammer's BPR Method, and the Oracle CASE*Method. The approximate contract amount was \$100,000.

GIS Needs Assessment Supporting Geographical Information System Development, City of Mountain View, CA.

Mr. Stackhouse worked with the City of Mountain View to provide a high-level needs assessment to determine the City of Mountain View's current use of geospatial information and GIS technology, and to develop an effective guide for the City's ongoing implementation of their GIS. This assessment included detailed recommendations with regard to development of a City-wide GIS management structure, transition to an Enterprise GIS architecture, development of a GIS Strategic (or Master) Plan, development and implementation of GIS Database Enhancement/Maintenance Plans, and overall recognition of City-wide staffing needs. The approximate contract amount was \$350,000.

California Department of Parks and Recreation, Environmental and Cultural Review Application (ECRA) Project.

As the Senior Project Manager, Mr. Stackhouse successfully supervised the completion of two Web-based applications that helped facilitate the incorporation of GIS technology into the day-to-day workflow for development and review of capital outlay projects at the Department of Parks and Recreation (DPR). The first is the Environmental and Cultural Review Application (ECRA), a Web application was developed using Java that supports DPR's CEQA-related compliance work. The ECRA facilitates the internal Parks CEQA process, allowing users to track project status, review documents, create and edit project boundaries, and export CEQA-related documents. The second web application functions as a metadata catalog for digital and non-digital information housed at each individual park unit. There are two main tools:

- Park units have the ability to upload metadata about files held at that specific unit, and can even upload the file if it exists in digital form.
- Allows users to access the metadata catalog for related documents from the CEQA/ECRA application.

Mr. Stackhouse designed a geodatabase that housed the GIS information, as well as raster images, for various facilities through the park system. This design also provided a basic link to DPR's existing facilities management application, MAXIMO by MRO Software. The approximate contract amount was \$220,000.

eWRIMS—State Water Rights Information System, California State Water Resources Control Board.

The Web-based Enhanced Water Right Information Management System (eWRIMS) was developed to track information on water rights in California. eWRIMS contains information on water right permits and licenses issued by the State Water Board and other claimed water rights. eWRIMS is also a module of the State Water Board's California Integrated Water Quality System (CIWQS) program. Mr. Stackhouse and his team developed a Web-based interactive mapping application which allows Water Board personnel to collect place-of-use data while in the office or field, supporting water right application and processing, and provides the following capabilities to the State Water Resource Control Board, Division of Water Rights:

- Real-time access to water rights data to both Water Board users internally and the general public.
- Web-based GIS editing, allowing internal users to add, delete, and modify water right points of diversions through a Web-based interface.
- Login and password security control for State Water Resource Control Board employees.
- Upstream and downstream searching of water rights within eWRIMS based on the geolocation of 20,000 place-of-use points which were linked by Mr. Stackhouse's programming staff to statewide copy of the National Hydrographic Dataset.

Mr. Stackhouse also oversaw the development, testing and deployment of a set of custom applications that support field-based GPS data collection of place-of-use information, including both desktop and mobile GPS application components.

Registration

Registered Professional Forester
No. 1869

ESRI Authorized Instructor

Technical Capabilities

Visual Studio 2010
ESRI Desktop 10.0
ESRI ArcGIS Server 10.0
C#.NET
Windows Server 2008 R2
SQL Server 2008 R2
SQL Server Administration
Windows Server 2008 Administration



Experience Highlights

Extensive experience managing both large and small scale projects and teams in different industries.

GIS, Remote Sensing, IT, and Database Management experience with an international footprint.

Advanced expertise and knowledge of data management.

Education

MBIT

Master of Business Information
Technology
Royal Melbourne Institute of
Technology
Melbourne, Australia

MSc

Metalogenesis
Campinas State University
Campinas, Brazil

BSc

Geology
University of San Paulo
San Paulo, Brazil

Recent Clients

CAL FIRE

Marcelo Braghin

GIS/IT Division Manager/ Project Manager

Marcelo Braghin is the GIS/IT Division Manager for VESTRA Resources and has 20 years of experience in GIS, Remote Sensing, IT, and Database Management with an international footprint. He has successfully implemented GIS standards across companies, countries, and roles in different industries ranging from natural resources to telecom, vehicle tracking, and telematics. On his current role, Mr. Braghin manages a portfolio of GIS consulting projects for different types of organizations and industries, such as Local Government, Environmental, Natural Resources, and others. Mr. Braghin is currently the product manager of GeoSystem Monitor, which is a unique monitoring system for GIS applications. As Senior GIS Analyst, he has worked with different GIS technologies, like ArcGIS for Server workflows, ArcGIS Online and ArcGIS for Desktop workflows for complex GIS Analysis. Mr. Braghin also has worked with mobile GIS workflows to sustain enterprise data management using spatial data. As part of the enterprise implementations, Mr. Braghin implemented GIS integrating with other systems and databases. As part of such implementations, he has managed various projects related to Data Migration (GIS, reports, geophysical, samples / drilling information) and developed some applications where customization was necessary, e.g. to use GIS to support television broadcasts. Mr. Braghin also worked in various projects using Remote Sensing data and technology to support GIS in environmental and natural resources applications.

Representative Project Experience

Cal Mapper – Phase 3, California Department of Forestry and Fire Protection (CAL FIRE)

Mr. Braghin is currently serving as the Senior Project Manager for the Cal MAPPER – Phase 3 project. The Cal MAPPER – Phase 3 project involves adding functionality to CAL FIRE's Management Activity Project Planning Event Reporter (Cal MAPPER), an existing Web Map Application hosted by CAL FIRE. An ongoing effort has been underway within CAL FIRE to bring the department's records from multiple resource management and fire prevention programs into a common database framework. The database framework has a spatial (GIS) component that facilitates mapping and monitoring of past project, assists in planning future program activities, and is readily available to emergency responders and resource management staff.

Multiple Projects, Rio Tinto Exploration, Singapore/Salt Lake City

Mr. Braghin served as the Global GIS Manager. A few of his work activities included serving as lead for a transition from MapInfo to ArcGIS, implementing a new Spatial Data Infrastructure, implementing ArcGIS Online, and designing an enterprise/office/ field workflow for GIS data.

Multiple Projects, BHP Billiton, Singapore

Mr. Braghin served as the Geoscience Data Coordinator for Mine Exploration. Work activities included implementing the outsource of GIS support services for Geoscientists, and managing the outsource of a Geophysical Data Migration Project and Data Management Services. He also coordinated and set standards for Geoscience Data Management worldwide.

Multiple Projects, BHP Billiton, Rio de Janeiro (Brazil)

Mr. Braghin served as the Knowledge Management Coordinator for the Americas. Work activities included implementing a vehicle tracking system, managing a GIS and Document Data Migration for legacy data in South America and coordinating services for Geoscience Data Management in the Americas (Brazil, Chile, and Canada).

Multiple Projects, De Beers Johannesburg, South Africa

Mr. Braghin served as the GIS Group Exploration Manager for the Geoscience group worldwide. He managed Geospatial services including data management, map production, Remote Sensing support, and software support. Mr. Braghin also served as a GIS Project Manager. A few of his responsibilities as a project manager were to lead a GIS standardization project across the globe, including ArcGIS Desktop and ArcSDE/Database; negotiate an Enterprise License Agreement, and to manage a GIS data migration project.

Multiple Projects, De Beers Brasilia, Brazil

Mr. Braghin served as the GIS/IT Manager for South America. He managed and improved services for GIS and managed IT services for South America operations, including field support and remote communication infrastructure. Additional work activities included implementing ArcSDE, implementing a secure server room, and managing and closing a legacy GIS data migration project.

Technical Capabilities

ArcSDE on Servers 10.2.2
ArcGIS for Desktop 10.2.2
ArcGIS for Server 10.2.2
ArcGIS Server JavaScript API
ArcGIS Image Server (ArcGIS Image Extension)
ArcGIS Extensions
ESRI Data Reviewer
ESRI Workflow Manager
ArcGIS Online
Portal for ArcGIS
GeoSystems Monitor
Microsoft SQL 2000, 2005, 2008, 2010 & 2012
Microsoft's Transact SQL/SQL Server
Python
VM Ware
Amazon / Azure

Windows Servers
Windows Desktop Os
Network Architecture
GIS Enterprise Architecture
Project Management
ArcGIS for Sharepoint
ArcGIS for Microsoft Office
Business Process Modelling
Program Management
Agile Project Management
Enterprise Architecture
Oracle
Citrix
Virtual Servers
IOS



Experience Highlights

Extensive implementation of GIS best practices and design of custom solutions.

Development and implementation of web-based applications, with an emphasis on user experience.

Management of diverse projects utilizing cutting-edge technology.

Education

B.S.
Natural Resource Planning and
Interpretation
Humboldt State University
Arcata, CA

Recent Clients

Vineyard (confidential)

California Department of Parks and
Recreation

National Cattlemen's Beef Association

Institute for Sustainable Economic,
Educational, and Environmental Design

Clint Kellar

Senior GIS Analyst/ Software Developer

Clint serves various roles including Project Manager, GIS Lead and software developer at VESTRA. He has 19 years of experience in the use, application development, and management of solutions that include Geographic Information Systems technology. Clint possesses first-hand knowledge in managing multiple projects utilizing GIS and associated applications. His technical toolkit includes extensive experience with Esri products for GIS analysis, modeling, and application development, as well as the implementation of non-linear system development methodologies and GIS best practices for application development. Clint is passionate about the use these technologies as a tool to solve problems, convey information, with a desired emphasis on user experience design.

Clint's topical experience has focused on the use and implementation of GIS technology for state and local governments and private corporations. This includes GIS infrastructure development and implementation, tool and workflow creation to meet specific client needs, and custom application development that utilizes up-to-date web technology. He is fluent in the use of ArcGIS desktop and server-based applications, website frameworks and languages (including HTML5, JavaScript, WordPress, JQuery, and PHP) and has experience in the development and management of relational databases. In addition, Clint has provided formal training and technical support. Clint is also VESTRA's lead ArcGIS Online Specialist, and he has extensive experience configuring and implementing solutions for clients that are based on ArcGIS Online subscriptions.

Currently, Clint is working as a software developer for a project with the National Cattlemen's Beef Association. He is in the process of developing and implementing a WordPress-based web application that incorporates dynamic web maps and related data, stored within ArcGIS Online. Clint is developing this framework based on a responsive design that allows for dynamic content changes based upon the user's device (desktop, tablet or smartphone browsers).

Clint recently completed work with a large vineyard (confidential client) to implement an enterprise GIS within their organization. This phased project initiated with a Needs Assessment, where an extensive review of the organizations spatial needs were evaluated and compiled. Using the results of the assessment, an enterprise GIS was implemented, based upon Esri ArcGIS software. Clint coordinated and contributed with the development of two custom web applications that were designed to provide data content specific to the organization. Following implementation activities, Clint provided training and support with the use of the enterprise GIS.

Representative Project Experience

Beef Tracker Web Application, National Cattlemen's Beef Association (NCBA)

Mr. Kellar serves as a software developer for the Beef Tracker project. He is involved in the design and development of web-based solutions that provide end users with map-enabled content. Clint is developing a website using the WordPress framework, with extensive customization to facilitate a secure environment that includes user-specific data.

Building Thriving Environments and Communities (B-TEC) Web Application, Institute for Sustainable Economic, Educational, and Environmental Design (I-SEED)

Mr. Kellar is working as a software developer on this project to develop B-TEC, a web-based tool that utilizes location-centric information to measure community health and wellbeing. He is developing the B-TEC platform using the WordPress framework, working with the VESTRA development team to include dynamic maps and tabular data reports through the use of the ArcGIS API for JavaScript and data services in ArcGIS Online.

Public Safety Technology Modernization Project, California Department of Parks and Recreation (DPR)

Mr. Kellar serves as the project manager for the Public Safety Technology Modernization project for DPR. He coordinates VESTRA's assistance with incorporating DPR GIS data into the California Department of Highway Patrol (CHP) Computer Aided Dispatch system. He facilitates inter-agency communications to coordinate this effort, and assists with establishing workflows and tool development to automate data conversion procedures.

GIS Database and Application, Vineyard (Confidential)

Mr. Kellar, acting as the Senior Project Manager, worked to develop a Geographic Information System (GIS) infrastructure, user interface, and database aimed at enhancing geographical knowledge while meeting internal business needs. Mr. Kellar helped to develop a tool designed to facilitate the geo-enabling of vast amounts of data resources relative to production and quality, if/when desired. This project is a phased approach beginning with a Needs Assessment, moving into establishment of Infrastructure/User Interfaces, and completing the process with a specialized geodatabase development.

State Wide Geocode, California Technology Agency (CTA)

Mr. Kellar served as the Senior Project Manager with the CTA to establish a statewide geocoding service. This service will eventually be used as a resource for all State of California agencies, based on the recent CTA requirement for all new state databases to include geocoded locational data for referenced data records. Mr. Kellar has assembled a team of professionals to accomplish this project. This includes GIS professionals, systems experts, and development staff. Mr. Kellar worked closely with CTA and other State stakeholders throughout the project. The overarching goals of this project were to develop a Statewide Geocode Service that meets the needs for the State, that is designed to accommodate budgetary and timeline constraints, and is scalable for future uses.

Pest and Damage Records-Data Management System Enhancements, California Department of Food and Agriculture (CDFA)

Mr. Kellar served as the Senior Project Manager for the Pest and Damage Records – Data Management System Enhancements (PDR) project for the California Department of Food and Agriculture (CDFA), working as the project lead, coordinating an extensive effort of re-writing the Web-based data entry and Web mapping application. In addition, Mr. Kellar implemented the use of Scrum methodology for this project, utilizing the iterative, deliverable-based approach for the PDR application development.

Putting Youth on the Map Web Map, University of California, Davis

Mr. Kellar served as the Senior Project Manager for the Putting Youth on the Map Web Map project. This project involved the development of a web map application using Esri software (ArcGIS for Server 10.0 and ArcGIS for JavaScript API). He worked with the client to identify functionality required for the application, and coordinated development efforts with VESTRA's Senior Developer staff.

Canada/Pacific Northwest – Northern California Transmission Line Project, Pacific Gas and Electric (work performed under previous employer)

Mr. Kellar served as the lead GIS Analyst supporting a preliminary review of options to establish a transmission line between Canada and Northern California. Mr. Kellar's work included the coordination of GIS data collection activities, with a multitude of data sources being investigated and contacted in order to obtain information. Data sources included the Canadian government (British Columbia Province), and various Federal, State, and local government agencies and departments. Following data collection, Mr. Kellar coordinated the assembly of the multi-source GIS data into continuous layers for analysis of alternatives for the transmission line. Mr. Kellar provided map analysis results, written report content, and participated in regular project meetings to discuss tasks and analysis findings.

Milltown Dam Removal and Cleanup Project, EMC-Squared/Envirocon (work performed under previous employer)

Mr. Kellar served as the lead GIS Analyst supporting work on the Milltown Dam Removal and Cleanup Project, part of the largest Superfund site in the western United States. His work involved data management and analysis of GIS data collected for the project. Mr. Kellar provided 3D modeling of contamination deposits using Esri Desktop software and AutoCAD. He also managed and provided queries/analysis from a relational database containing soil sample results collected throughout the Superfund site. Mr. Kellar worked closely with the project's lead engineers and other stakeholders to coordinate GIS-related efforts, identify needs, and communicate analysis results.

Wildlife and Habitat Inventory/Monitoring Project, California Department of Fish and Game (work performed under previous employer)

Mr. Kellar served as the lead GIS Analyst and Applications Developer for the Wildlife and Habitat Inventory/Monitoring Project. This project was an ongoing study to sample wildlife and habitat information across Northern California. Mr. Kellar worked with the project's lead biologist to establish sampling sites and methodologies. He developed a relational database with a data schema to match the field-collected information. Mr. Kellar coordinated the selection of sampling sites, using a custom ArcGIS Desktop script he developed to randomly select the sites. Mr. Kellar also developed a web-based mapping application that displayed the field-collected information, including site locations, associated tabular information, and panoramic digital photographs of the site.

Technical Capabilities

ArcGIS for Desktop 10+	HTML5	MySQL
ArcGIS for Server 10+	JavaScript	Microsoft SQL Server
ArcGIS Online for Organizations	JQuery	Adobe Creative Suite
ArcGIS API for JavaScript	Visual Studio 2012	SketchUp
Esri Maps for Office	PHP	Microsoft Visio
Python	IIS 7	Microsoft Project
WordPress	Twitter Bootstrap	



Experience Highlights

Diverse experience with many types and sizes of public agencies.

Experience with EGIS implementation in historically non-technical organizations.

Advanced database development skills.

Education

M.C.R.P.
Master of City and Regional Planning,
University of Memphis, TN

B.Arch.
Bachelor of Architecture,
Andhra University, Andhra Pradesh,
India

Recent Clients

City of Mountain View

San Francisco Public Utilities
Commission

City of Oakland

Lassen County Transportation
Commission

Siskiyou Telephone

Solomon Pulapkura

GIS Specialist/Project Manager

Solomon Pulapkura is a GIS Specialist, with 8 years of experience and a background in a wide variety of GIS processes and procedures. His experience includes the design, development, and implementation of multiple types of projects for a variety of governments. Mr. Pulapkura is detail oriented, resourceful, and accurate, with strong analytical and problem solving skills, and the ability to multi task, reach project goals, and meet tight deadlines.

Representative Project Experience

Enterprise GIS Implementation

City of Mountain View, California

Mr. Pulapkura is the Project Manager for the City of Mountain View Enterprise GIS Implementation Project. VESTRA was contracted to provide a high-level needs assessment to determine the City of Mountain View's (City) current use of geospatial information and GIS technology, and to develop an effective guide for the City's ongoing implementation of their GIS. VESTRA's assessment included detailed recommendations with regard to development of a City-wide GIS management structure, transition to an Enterprise GIS architecture, development of Strategic (or Master) Plan, development and implementation of GIS Database Enhancement/ Maintenance Plans, and overall recognition of City-wide staffing needs.

Enterprise GIS Upgrade and Web Application Implementation

San Francisco Public Utilities Commission

Mr. Pulapkura led the upgrade of SFPUC's Enterprise GIS to version 10.1. This included upgrading the ArcGIS Server and coordinating the development and transition of users from an ArcIMS based web viewer to a Geocortex Web Application. The project also involved setting up Image and Geocoding services for the web application to consume and designing SDE Replication workflows for SFPUC's satellite offices.

State Transportation Projects Inventory

CalTrans

Mr. Pulapkura is the lead database designer for CalTrans' State Transportation Projects Inventory. This project includes working closely with CalTrans project teams to perform requirements gathering, making recommendations based on client feedback, and design of a database with detailed technical specifications for a statewide inventory of CalTrans Projects.

Work Management System Implementation, City of Oakland Public Works Agency, Oakland, California

Mr. Pulapkura successfully managed implementation of a Work Management System for the City of Oakland Public Works Agency. VESTRA, along with Azteca Systems, Inc. (Sandy, UT), and Oakland Computer Company, was contracted by the City of Oakland Public Works Agency to deploy an agency-wide Computerized Work Management System. The project included implementation of the Cityworks computerized work management system software, real-time wireless connection from the field to the main system, a public-facing website for citizens to submit non-emergency requests for service and report problems associated with City-owned property and buildings, an Automated Vehicle Location (AVL) system for locating key equipment and work crews supporting emergency operations, an internal website to drive the decision-making framework, and user training and customized training materials for the 200-plus users within the Public Works Agency.

Siskiyou Telephone Community Project Design/Implementation, Siskiyou County, California

Mr. Pulapkura was the Project Manager and Lead Designer for the Siskiyou Telephone Community Design/Implementation Pilot Project. The project started initially as a pilot project to study Siskiyou Telephone's CAD data, and to develop a workflow for CAD conversion. This process may eventually lead to the creation of a geodatabase design for STC that would not only capture and store their network assets, but would provide the ability to view information about those assets in the AS/400 system, leading to the development of a comprehensive, efficient, and effective GIS that will be used to maintain a GIS network for Siskiyou Telephone Company.

Lassen County Transportation Commission GIS Development Services, Lassen County, California

Mr. Pulapkura is the Project Manager and Lead GIS Analyst for the development of GIS data in support of the Lassen County Transportation Commission's California Regional Blueprint Plan. As part of this effort, VESTRA is using the raster GIS modeling application UPlan to model growth scenarios. Mr. Pulapkura is leading VESTRA's effort to develop GIS and demographic data for use in UPlan, with the initial focus of the modeling effort to be to develop a current trends scenario. Three scenarios may be generated for analysis.

Various Projects, City of North Las Vegas, Nevada

During Mr. Pulapkura's employment with the City of North Las Vegas, he organized the creation and implementation of an upgraded storm water infrastructure database; designed schema and overall structure of a comprehensive database of Public Works' GPS assets; designed GIS databases, developed workflow, analyzed user needs, identified their resolution and produced spatial data products in support of major multi-million dollar Capital Improvement Projects; developed custom tools, toolbars, and applications using VB.NET, VBA and C# along with ArcObjects to expedite and simplify mapping processes in ArcMap; organized research, data collection and data conversation for a GIS inventory of City Owned Properties; created and maintained a Geometric Network of Fiber Optic Strands and Conduits; coordinated the integration of GIS/GPS data in Hansen Asset and Work Order Management System; performed geoprocessing, spatial and demographic analysis in support of City Bikeways Master Plan; and coordinated and communicated with other departments and agencies and acted as liaison in the design, development and implementation of GIS needs and functions.

Technical Capabilities

ArcGIS for Desktop 10.x

ArcGIS for Server 10.x

ArcGIS Online



Agile Project Management
City Engine 3D Modeling
Geocortex 4.1
Cityworks
MS SQL Server 2008 R2
Python
JavaScript
WPF SDK Development
ArcObjects
Visual Studio 2010 (C#.NET)

Certificates

GISP

ESRI Authorized Training
Customizing ArcGIS Desktop
Learning VBA for New ArcGIS Developers
Extending ArcGIS Desktop Applications
Introduction to Geoprocessing Scripts Using Python



Education

M.S. (In Progress), Environmental
and Natural Resource Science
Humboldt State University
Arcata, CA

B.L.A., Landscape Architecture
Kansas State University
Manhattan, KS

Recent Clients

Cal Fire
Modoc County

Technical Capabilities

ArcGIS for Desktop 10.2.2
ArcGIS Online
Adobe Creative Suite
SketchUp
Microsoft Visio
AutoDesk
CityEngine
SPSS

Jessica Blackwell

QA Specialist/GIS Technician

Jessica Blackwell is a QA Specialist and GIS Technician with a broad educational and professional background. Jessica's experience includes extensive GIS coursework, landscape architecture design, technical documentation, database development, and spatial analysis using communication technologies. Jessica is thoughtful and detail-oriented, and possesses strong analytical, communication, and problem solving skills.

Representative Project Experience

Features Classes Conversion and Analysis, California Department of Forestry and Fire Protection (CAL FIRE)

Ms. Blackwell has served as a QA Specialist and GIS Technician for the Features Classes Conversion and Analysis project for CAL FIRE. VESTRA has extensive experience working with CAL FIRE converting county roads feature classes to roads feature classes, the new roads features classes conform to the Altaris CAD's requirements. VESTRA also has experience developing new Atom (and City) feature classes that are better aligned with county parcels and TRAs (Tax Rate Areas). For this project, VESTRA has developed an extensive library of Python scripts to programmatically address many common data errors and formatting needs necessary for incorporation into the CAD system. VESTRA's experience includes working with CAL FIRE data from Napa, Sonoma, Lake, Siskiyou, Humboldt, Mendocino, Tuolumne, Calaveras, Solano, Colusa, Yolo, Contra Costa, Alameda, Stanislaus, San Joaquin, and Santa Clara Counties.

Multiple Projects, ENPLAN, Redding, CA

Ms. Blackwell was responsible for performing project lead duties and client consultations for geospatial project, as well as providing technical support, data processing, and management for geospatial development. Work activities include conducting geospatial data analysis for various data types and projects.

Landscape Architect Intern, Inyo National Forest

While with Inyo National Forest, Ms. Blackwell was responsible for conducting site inventory and analysis of Forest recreational sites; designing and developing construction documents for recreational site improvements; and conducting visual resource assessments of forest travel routes.